

## CLAIMS:

1. A voltage converter for converting an input voltage to an output voltage comprising a plurality of cascaded voltage multipliers and control circuitry for controlling the plurality of voltage multipliers, characterized in that the control circuitry comprises a switching means for activating at least one first voltage multiplier selected from the plurality of voltage multipliers and for switching at least one further voltage multiplier located in the cascade before the first voltage multiplier in the same way as the first voltage multiplier.  
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2. A voltage converter according to claim 1, characterized in that switching comprises activating and/or disabling.  
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3. A voltage converter according to one of the preceding claims, characterized in that the first voltage multiplier is one of a number of activated voltage multipliers also located in the cascade at a second or higher order stage at most, in particular located in a sequence of stages at the end of the cascade.  
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4. A voltage converter according to one of the preceding claims, characterized in that the further voltage multiplier is one of a number of further voltage multipliers located at the first or higher order stages of the cascade, in particular located in a sequence of stages at the beginning of the cascade.  
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5. A voltage converter according to one of the preceding claims, characterized in that at least one of the plurality of voltage multipliers is formed by a charge pump.  
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6. A voltage converter according to one of the preceding claims, characterized in that the charge pump comprises a charge storage element, in particular a capacitor, a switch, in particular a MOSFET switch, and a driver, in particular a bottom plate driver.

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7. A voltage converter according to one of the preceding claims, characterized in that one or more of the voltage multipliers have at least one clock input.

- 10 8. A voltage converter as claimed in claim 7, characterized in that the control circuitry is connected to the clock input for supplying a clock signal to the voltage multiplier for controlling the voltage multiplier.

9. A voltage converter according to one of the preceding claims, characterized in that the switching means is a programmable logic device.
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10. A voltage converter as claimed in claim 9, characterized by a programming means for operating the switching means as a function of the output and/or the input voltage.

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11. A voltage converter as claimed in claim 9 or 10, characterized in that the programming means comprises a software code section capable of activating a number of one or more first voltage multipliers in case of insufficient input voltage.

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12. A voltage converter as claimed in one of claims 9 to 11, characterized in that the programming means comprises a software code section for disabling a number of voltage multipliers selected from the plurality of voltage multipliers in case of sufficient input voltage.

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13. A voltage converter as claimed in one of claims 9 to 12, characterized in that the programming means comprises a software code section capable of selecting a number of one or more further voltage multipliers from the disabled voltage multipliers for switching the further voltage multipliers in the same way as the activated first voltage multiplier.
14. Driving circuit, comprising a voltage converter as claimed in one of the preceding claims, in particular a driving circuit for a display device.
15. Driving circuit as claimed in claim 14, working under a current load of 0.1 mA to 10 mA.
16. Method of converting an input voltage to an output voltage by means of a voltage converter comprising a plurality of cascaded voltage multipliers, characterized in that at least one first voltage multiplier selected from the plurality of voltage multipliers is activated and at least one further voltage multiplier located in the cascade before the first voltage multiplier is switched in the same way as the first voltage multiplier.